

**EMERGENCY RESPONSE AND REMOVAL REPORT**  
**FOR**  
**LARD OIL COMPANY OIL SPILL**  
**914 FLORIDA AVENUE, SW**  
**DENHAM SPRINGS, LIVINGSTON PARISH, LOUISIANA**

Prepared for

**U.S. Environmental Protection Agency**

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Contract No. EP-W-06-042

Technical Direction Document No. 2/WESTON-042-16-020

WESTON W.O. No. 20406.012.002.1037.01

NRC Nos. 1156486 and 1156749

FPN ID E16620

SEMS ID N/A

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December 2016

## PROJECT SUMMARY

This final report describes the U.S. Environmental Protection Agency (EPA) response actions for the Lard Oil Company Oil Spill response. The release occurred at the Lard Oil blending and distributing facility located at 914 Florida Avenue SW in Denham Springs, Livingston Parish, Louisiana as a result of catastrophic flooding that began on 13 August 2016. Lard Oil representatives estimated that approximately 300 to 600 gallons of unused lubricating oil and synthetic grease and 451 gallons of unused diesel exhaust fluid additive was released from the facility into the floodwaters. Discharged oil products impacted approximately 65 residential and commercial properties in a southeasterly direction from the facility before any remaining product was carried away in floodwaters. The detailed report follows this summary, and all attachments are provided as separate portable document format (PDF) files.

On 17 August 2016, a resident adjacent to the Lard Oil facility reported to the National Response Center (NRC) (Report No. 1156486) a discharge of an unknown amount of oil from the Lard Oil Company facility into the adjacent residential neighborhood. In response to the call, EPA Region 6 Emergency Management Branch (EMB) On-scene Coordinator (OSC) Bryant Smalley activated the EPA Region 6 Superfund Technical Assessment and Response Team (START-3) contractor to initiate a Tier 1 Response. The EPA Team was tasked to respond to the incident, provide written and photographic documentation of the activities, and conduct sampling for oil analysis. The EPA Team mobilized to the site on 18 August 2016 and began documenting conditions at the scene. EPA noted displaced oil tanks at the rear of the Lard Oil facility and on adjacent residential properties. Additionally, oil was observed in roadside ditches and on vegetation as well as on the outer walls of houses and buildings on properties southeast of Lard Oil. Consequently, EPA provided verbal and written direction (via Notice of Federal Interest [NOFI] letter) that Lard Oil, as responsible party (RP), must report the discharge to the NRC, activate a response, and provide daily updates to EPA.

On 19 August 2016, after verbal direction from EPA, a representative of Lard Oil reported a discharge of an unknown amount of oil from their facility to the NRC (Report No. 1156749). The two separate NRC reports referenced the same oil discharge incident.

Lard Oil began response activities on 18 August 2016 and hired PPM Associates of Baton Rouge, Louisiana to manage response and removal activities. The RP conducted assessments of individual

properties and removal actions after procuring signed access agreements. Removal activities included oiled vegetation removal, soil and sediment excavation, wooden fence removal and replacement, exterior building pressure-washing, and ditch dredging. The EPA Team collected separate, signed access agreements and documented RP actions via logbook and digital photography. The EPA Team conducted indoor air monitoring for volatile organic compounds (VOCs); no measurements were recorded greater than 1 part per million (ppm). Due to the concerns of affected residents, the Louisiana Department of Health and Hospitals (LDHH) agreed to take the lead to address indoor air quality concerns. Further, the Louisiana Department of Environmental Quality (LDEQ) agreed to provide oversight of soil remediation activities when visible oil was removed from properties where access was granted.

The EPA Team collected 6 potential spill-source samples from the Lard Oil facility and 12 samples off-site from downstream residential and commercial properties. Samples were shipped to the United States Coast Guard (USCG) Marine Safety Laboratory for oil identification and comparative analyses. Eight of the 12 off-site samples were identified as lubricating oil or primarily lubricating oil; analytical results stated that 4 of the 8 exhibited “important similarities” to suggest that they are related to one of the potential source samples.

On 15 September 2016, after LDEQ approval of a Sampling and Analysis Plan, the RP began collecting soil samples from properties where contamination had been documented. A minimum of three surface samples were collected per property. Samples were shipped to an off-site laboratory for analysis of aliphatics/aromatics in the appropriate carbon range by the Massachusetts Department of Environmental Protection (MADEP) Extractable Petroleum Hydrocarbons (EPH) method. The RP completed the soil removal and confirmation sampling on 28 September 2016.

On 29 September 2016, EPA OSC Bryant Smalley conducted a final site-walk to verify that visible oil had been removed from properties where access was granted. Visible oil contamination was observed to have been removed from the subject properties. As agreed by participating agencies, LDEQ and LDHH assumed the lead regarding further remediation activities and oversight of indoor air quality issues, respectively. Lard Oil began submitting Risk Evaluation/Correction Action Plan (RECAP) reports to LDEQ on each property where clean-up activities were conducted. A total of 52 reports will be submitted, including 1 report for the Lard Oil facility.

This report was prepared to describe the technical scope of work that was completed as part of Technical Direction Document (TDD) No. 2/WESTON-042-16-020. EPA OSC Bryant Smalley provided direction for the response, and the START-3 Project Team Leader (PTL) was Keith Delhomme.

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The EPA Task Monitor did not provide final approval of this report prior to the completion date of the work assignment. Therefore, Weston Solutions, Inc. has submitted this report absent the Task Monitor's approval.

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## 1. INTRODUCTION

On 18 August 2016, the U.S. Environmental Protection Agency (EPA) Region 6 Emergency Management Branch (EMB) activated Weston Solutions, Inc. (WESTON®), the EPA Region 6 Superfund Technical Assessment and Response Team (START-3) contractor, to conduct a Tier 1 incident response. Under direction from EPA On-scene Coordinator (OSC) Bryant Smalley and as outlined in Technical Direction Document (TDD) No. 2/WESTON-042-16-020 (Attachment O), START-3 was tasked to assess the impact of an oil spill and associated response activities; provide written and photographic documentation; provide technical support to EPA; provide site mapping; conduct website updates; and complete this Final Report.

The geographic coordinates of the Lard Oil Company (Lard Oil) Site are Latitude 30.475797° North and Longitude 90.960069° West. The coordinates were determined using a handheld global positioning system (GPS) based on the World Geodetic System – 1984 (WGS-84) with accuracy estimated at less than 50-feet circular probable error. The address of Lard Oil is 914 Florida Avenue SW, Denham Springs, Livingston Parish, Louisiana. A Site Location Map and a Site Area Map are included as Attachments A and B, respectively.

On 17 August 2016, a resident adjacent to the Lard Oil facility reported to the National Response Center (NRC) (Report No. 1156486) a discharge of an unknown amount of oil from the facility into the adjacent residential neighborhood. Additionally, on 19 August 2016, after verbal direction from EPA, a representative of Lard Oil reported a discharge of an unknown amount of oil from their facility to the NRC (Report No. 1156749). The two separate NRC reports referenced the same oil discharge incident (Attachment K). Area stormwater drains eastward to Grays Creek, which flows southeasterly into the Amite River, which continues flowing in a southeastern direction into Lake Maurepas and finally into Lake Pontchartrain, which meets the definition of “navigable waters” of the United States (US) as defined in Section 502(7) of the Federal Water Pollution Control Action (FWPCA).

## 2. BACKGROUND

Beginning 13 August 2016, slow-moving storms produced more than 2 feet of rain in the Denham Springs area, causing catastrophic flooding of the Amite River. According to local reporting,

approximately 70 to 80 % of Denham Springs was flooded by the event, including the Lard Oil facility and the adjacent mixed residential and commercial neighborhood located to the southeast. The houses and commercial buildings were inundated with approximately 6-8 feet of floodwaters. Lard Oil blends and distributes ExxonMobil lubricating oils to oil and gas-related industries in South Louisiana and Mississippi, with headquarters in Denham Springs, Louisiana. According to Lard Oil representatives, the following 8 products were released from their facility as a result of the subject flood:

- Castrol 5W-20 Lubricating Oil
- Castrol 5W-30 Lubricating Oil
- Mobil 5W-30 Lubricating Oil
- ACDelco Dexos 10W-20
- Mobiltrans HD 30 Lubricating Oil
- Mobil DTE FM 32 Lubricating Oil
- Mobilith SHC 460 Synthetic Grease
- Blue Def Diesel Exhaust Fluid

Material Safety Data Sheets (MSDSs) for these products are provided as Attachment E. Lard Oil representatives estimated that approximately 300 to 600 gallons of unused lubricating oil and synthetic grease and 451 gallons of unused diesel exhaust fluid additive were released from the facility into the floodwaters. Discharged oil products impacted houses, office buildings, and vegetation within a 0.05-square-mile area in a southeasterly direction from the facility, before any remaining amount was carried away in floodwaters. To a lesser extent, soils and sediments on the same properties were also impacted.

### **3. SUMMARY OF ACTIONS**

On 18 August 2016, the EPA Team mobilized to the site to perform an initial site assessment to determine the extent of the oil discharge. EPA noted displaced oil tanks and containers at the rear of the Lard Oil facility and on adjacent residential properties. Additionally, oil was observed in roadside ditches, on vegetation, and on the exterior walls of houses and buildings on properties southeast of Lard Oil. The approximate boundaries of the impacted off-site area was determined to include Service Drive and Audubon Street to the northwest, Chestnut Street to the southwest, Range Avenue to the southeast, and Capital Street to the northeast (see Site Layout Map provided as Attachment C). The EPA Team documented conditions at the scene in a site logbook and via digital photographs. After

conducting the initial assessment, Lard Oil was identified by EPA OSC Smalley as a responsible party (RP) of this incident. EPA contacted the RP to notify them of the discharge and inform them of their responsibilities; EPA issued the RP a Notice of Federal Interest (NOFI) (Attachment F) on 18 August 2016.

The RP hired PPM Associates from Baton Rouge, Louisiana to manage response and removal activities. Response activities began on 19 August 2016 with a crew of approximately 30 persons removing pooled oil in roadside ditches to prevent further migration of the oil. Concurrently, EPA began monitoring indoor air with a portable photo-ionization detector (PID) for Volatile Organic Compounds (VOCs) inside four houses at the request of owners who expressed concerns about acute health concerns. Prior to entering any property, EPA secured signed access agreements from the property owners (Attachment G). EPA detected no VOC levels greater than 1 part per million (ppm). Additionally, the EPA Team initially collected three samples from the Lard Oil facility (pooled, oily water mixtures) and 6 samples from roadside ditches and rights-of-way (sediments and vegetation) for oil identification and comparative analyses. The samples were collected in accordance with the Quality Assurance Sampling Plan provided as Attachment H, and sample locations are shown on the Sample Location Map provided as Attachment D. The samples were shipped to the U.S. Coast Guard (USCG) Marine Safety Laboratory (MSL) in New London, Connecticut for oil identification and comparative analyses. The MSL Analytical Results are provided as Attachment I. Sample analytical results are discussed in Section 4.

From 20 to 30 August 2016, EPA continued to collect signed access agreements from property owners, conduct indoor air monitoring for VOCs at properties with access, delineate the extent of off-site contamination and monitor assessment and removal activities of the RP. Approximately 65 properties were identified as being potentially impacted by the oil release; of these properties, 55 owners signed EPA access agreements covering 59 properties during this period, including the Lard Oil facility. The RP also collected separate signed access agreements from the same properties. Six property owners denied access to both EPA and the RP. Forty-six properties were identified as having deposits of oil in the yards and 39 having oil staining on the physical exterior of the house or building. EPA recorded no indoor VOCs greater than 1 ppm.



RP removal activities during this period included removing oiled vegetation (trimming plants, mowing grass) and manually cleaning the exterior of contaminated homes and building walls with a degreaser, which was followed by pressure-washing. Additionally, the RP removed contaminated sediment in roadside ditches and contaminated wooden fences where given permission. Contaminated plant clippings and grass were bagged and contaminated sediments were drummed before being staged at a secure location at the Lard Oil facility for waste profile and disposal. Representatives from the Louisiana Department of Environmental Quality (LDEQ) determined that the limited oil residual on removed fences and rags used to wipe oiled exterior walls were de minimis and could be disposed of with other flood debris in the local solid waste stream. Spent pressure-wash water was also determined to be de minimis and was not captured for disposal.

The EPA Team collected a total of 6 additional off-site soil and liquid samples on 22, 24, and 26 August 2016 and 3 additional potential source samples on 28 August 2016. The potential source samples were collected from 5-gallon bulk containers of lubricating oil (Castrol 5W-20 and 5W-30, Mobil 5W-30) that RP representatives stated were similar to the oil released from their facility due to the flood. The bulk containers were procured from another Lard Oil facility as similar product was not available at the Denham Springs facility. RP personnel stated the original vessels that contained the spilled oil were completely empty of product due to the flood and had been washed by workers, leaving no residue for potential sampling. The samples were again shipped to the USCG MSL for oil identification and comparative analyses. The samples were collected in accordance with the QASP (Attachment H) and labeled as described previously. Sample locations are shown on the Sample Location Map (Attachment D). The MSL Analytical Results are provided as Attachment I. Sample analytical results are discussed in Section 4.

On 31 August 2016, Louisiana Department of Health and Hospitals (LDHH) personnel visited the site at the invitation of EPA. LDHH observed the impacted neighborhood and as the Primary Agency responsible for public health, agreed to take the lead addressing any indoor air quality concerns. Further, LDEQ agreed to provide oversight of soil remediation activities once visible oil was removed from properties where access was granted. EPA continued to provide oversight of the RP's assessment and clean-up activities during the first two weeks of September 2016, which consisted of continued removal of contaminated vegetation and initiating removal of contaminated surface soils.

Following LDEQ approval of their Sampling and Analysis Plan in mid-September, the RP began collecting confirmation soil samples from properties where contamination had been documented and a removal occurred. A minimum of 3 surface samples were collected per property, with 1 located along the upstream boundary of each property. The remaining sample locations were biased in areas where soil and/or vegetation removals occurred. Samples were screened for VOCs with a portable ionization detector (PID) and depth samples were collected up to 24 inches below ground surface (bgs) at locations where samples exhibited VOC measurements of approximately 50 parts per million (ppm) or greater. Samples were shipped to an off-site laboratory for analysis of aliphatics/aromatics in the appropriate carbon range by the Massachusetts Department of Environmental Protection (MADEP) Extractable Petroleum Hydrocarbons (EPH) method. The RP completed the soil removal, confirmation sampling, and backfill as necessary with clean material on 28 September 2016. EPA documented the sampling in a logbook and with digital photography.

On 29 September 2016, EPA OSC Smalley conducted a final site-walk to verify that visible oil had been removed from properties where access was granted. Visible oil contamination was observed to have been removed from the subject properties. As agreed by all parties, LDEQ and LDHH would be the lead agencies regarding further remediation activities. The RP began submitting Risk Evaluation/Correction Action Plan (RECAP) reports to LDEQ on each property where clean-up activities were conducted. A total of 52 reports will be submitted, including 1 report for the Lard Oil facility. Three property owners revoked access after previously signing agreements.

#### **4. ANALYTICAL RESULTS**

A total of 6 samples were collected from the potential spill-source at the Lard Oil facility and 12 off-site samples were collected at downstream residential and commercial properties. Sample locations are illustrated on the Sample Location Map provided as Attachment D. Samples were shipped to the USCG MSL for oil identification and comparative analyses. The MSL Laboratory Reports are provided as Attachment I.

Eight of the 12 off-site samples were identified as lubricating oil or primarily lubricating oil; the remaining 4 samples did not have detectable amounts of hydrocarbons. Four of the 8 off-site samples containing oil or primarily oil exhibited important analytical similarities to suggest that they are

related to 1 of the potential source samples (914F-02-08192016). Of the 3 potential source samples that were not bulk product samples, 2 were identified as primarily lubricating oil; however, the analytical data for the 2 identified as primarily lubricating oil did not match the analytical data associated with the 3 potential bulk product source samples. The third non-bulk product potential source sample did not have detectable amounts of hydrocarbons within the sample. An analytical results summary table is provided in Attachment J.

This Final Report was prepared as part of the requirements of TDD No. 2/WESTON-042-16-020 and serves as documentation of work completed. The NRC Reports, Pollution Reports, Digital Photographs, and Site Logbooks are provided as Attachments K through N, respectively.

## **5. LIST OF ATTACHMENTS**

- A. Site Location Map
- B. Site Area Map
- C. Site Layout Map
- D. Sample Location Map
- E. Material Safety Data Sheets
- F. Notice of Federal Interest
- G. Access Agreements
- H. Quality Assurance Sampling Plan (QASP)
- I. Laboratory Analytical Results
- J. Analytical Results Summary
- K. NRC Report Nos. 1156486 and 1156749
- L. Pollution Reports (POLREPs)
- M. Digital Photographs
- N. Site Logbooks
- O. TDD No. 2/WESTON-042-16-020

